Work Order ID 67417

Monday, March 21, 2011 7:09:21 AM

Item ID: D205-634-041 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Replacement Skidtube

Start Date: 3/21/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 3/31/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Approvals: **Process Plan:** M **Date:** 1-03-21 **Tooling:** _____ **Date:** _____ **Run Start** **Stop**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D2580-041	Rev.D DEO-D1								
100	DOCUMENT CONTROL	0.00							
DC	**Memo**	0.00							
Document Control	Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG003								
110	BENDING MACHINE - SKIDTUBES	0.00				1	0	BE 1/03/21	
CNC Bend 1	**Memo**	0.00							
CNC Delta 100 Bender	1-Bend as per program D2580.C on CNC Bender and Folio 16 2-Cut tubes as per Dwg. D2580 3- scribe batch# in aft end of tube								

B67417

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item Name: Replacement Skidtube

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Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
Skidtubes						1		BB	11/03/22
	Memo	0.00							
Skidtubes	1- Deburr ends and remove bending marks								
	2- Prepare tube for swaging as per QSI 002								
130	QC5- Inspect part completeness to step on W/O	0.00							
QC								11-3-22	
	Memo	0.00							
Quality Control									

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Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140		0.00							
Skidtubes	**Memo**	0.00							
Skidtubes	1-Weld step D2576 as per Dwg. D2580 and QSI 004 A/R□□□ Aluminum Rod M116577 BE-11/03/22 2-Grind welds on step as per Dwg D2580 3-Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002 and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x17G to start expantion and finish with 1/2 x 18G to achieve dwg dimention. 4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web.Deburr 6-Drill pilot holes for aft cap using DT 8215Open holes to 0.208". Deburr 7-Drill pilot holes for Tow ring using DT8091, open to .640"and Deburr BE-11/03/22 04/01/01							
150	QC10- Inspect visual per QSI004- ground welds	0.00							
QC	**Memo**	0.00							
Quality Control									

Dart Aerospace Ltd

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Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC5- Inspect part completeness to step on W/O	0.00				1			11/04/01
QC	**Memo**	0.00							
Quality Control									
170	Pressure Wash per QSI005 4.3	0.00				1	0		11/02/01
HandFinish	**Memo**	0.00							
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.								
180	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00				1		BR	11-4-1
Powdercoat	M115951 **Memo**	0.00							
Powder Coating	START TIME: 8:50 OVEN TEMPERATURE: 320° FINISH TIME: 9:20.								

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC3- Inspect Part Finish	0.00							
QC	Memo	0.00				1	0	M	11/04/11
Quality Control									

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Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** **Stop**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							
HandFinish						1	ϕ		4/04/01
	Memo	0.00							
Hand Finishing	1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates A/R □□□ Sikaflex-291 □ M116040 Sikaflex expire date: 4/09								
	2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580								
	3-Inspect for foreign object per QSI 024								
	4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive A/R □ □□ Sikaflex-291 □ M116040 Sikaflex expire date: 4/09								
	5-Wing Walk as per Dwg D2580 and QSI 005 4.4 Batch: M116402								

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W/O:		WORK ORDER CHANGES					
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Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

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Required Date: 3/31/2011 **Req'd Qty:** 1.00 **Customer:**

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Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	QC5- Inspect part completeness to step on W/O	0.00							
QC	**Memo**	0.00							
Quality Control	Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024								
220		0.00							
Packaging	Packaging								
Packaging	**Memo**	0.00							
	Identify and pack for shipping as per PPPD205-634-041 Location: 73 PPP Rev: K								
230	QC21- Final Inspection - Work Order Release	0.00							
QC	**Memo**	0.00							
Quality Control									

Sub 4/01

11/4/01

11/04/01

11-04-01

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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Picklist Print

Monday, March 21, 2011 7:09:27 AM

7

Work Order ID: 67417

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 3/21/2011 **Required Date:** 3/31/2011

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
KJ IPP Rev P 10.02.19
per PAR09-043 EC verified by:DD
IPP Rev. O 06.02.28 Added paperwork EC
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q
10.12.01 as per chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4202-1		Manufactured	No			140	Each	502.0000	20	20		BE 11/04/01	
Spacer										B 67430	20		
				Location			**Loc Qty**		**Loc Code**				
				LG002			502						
					65529		13						
					66121		1						
					66929		110						
					67129		201						
					67308		177						
D2580-1		Manufactured	No			110	Each	6.0000	1	1		BE 11/03/01	
205 Skidtube bent detail										B 67073			
				Location			**Loc Qty**		**Loc Code**				
				LG			6						
					59856		1						
					66727		1						
					67075		2						
					67076		2						
D2576-3		Manufactured	No			140	Each	29.0000	1	1		BE 11/03/22	
Step (maching detail)													
				Location			**Loc Qty**		**Loc Code**				
				LG			29						
					52215		29			17			

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

Monday, March 21, 2011 7:09:28 AM

7

Work Order ID: 67417

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 3/21/2011 **Required Date:** 3/31/2011

Start Qty: 1.00 **Required Qty:** 1.00

D2855	Manufactured	No	200	Each	77.0000	1	1	
Cap								

Location		Loc Qty	Loc Code	
FP005		1		
	56613	1		
fp7		6		
	65519	6		
ST024		70		
	50513	1		
	50770	28		
	51539	2		
	53791	4		X1
	65569	35		

AN3-5A	Purchased	No	200	Each	679.0000	2	2	
Bolt								

Location		Loc Qty	Loc Code	
ST350		679		
	115016	13		
	115371	500		
	116632	166		X2

AN960JD10L NAS1149D0332J	Purchased	No	200	Each	4.0000	2	2	
Washer								

Location		Loc Qty	Loc Code	
ST335		4		
	11912	4	M117010	X2

Dart Aerospace Ltd

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Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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7

Work Order ID: 67417

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 3/21/2011 **Required Date:** 3/31/2011

Start Qty: 1.00 **Required Qty:** 1.00

ALS7-1032-130		Purchased	No		200	Each	1,478.000	50	50	
Insert										

Location		Loc Qty	Loc Code
FP		21	
	115079	21	
ST282		1457	
	113238	17	
	115502	440	
	116800	1000	

AN3C4A		Purchased	No		200	Each	2,667.000	50	50	
BOLT										

Location		Loc Qty	Loc Code
ST350		2667	
	115300	25	
	116075	337	
	116924	1200	
	117010	105	
	117094	1000	

AN960C10L	NAS1149C0332R	Purchased	No		200	Each	-19.0000	50	50	
washer										

Location		Loc Qty	Loc Code
ST297		-19	
	107534	-21	M 116304
	108246	2	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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Work Order ID: 67417

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 3/21/2011 **Required Date:** 3/31/2011

Start Qty: 1.00 **Required Qty:** 1.00

D3566-13	Manufactured	No	200	Each	48.0000	1	1	M 11/04/01
Gasket								

Location	Loc Qty	Loc Code	
FP014	48		
66137	12		
66550	36		X1

D3566-5	Manufactured	No	200	Each	26.0000	1	1	M 11/04/01
Gasket								

Location	Loc Qty	Loc Code	
FP015	26		
63574	1		
65528	4		
66146	1		
66552	20		X1

D3566-1	Manufactured	No	200	Each	22.0000	2	2	M 11/04/01
Gasket								

Location	Loc Qty	Loc Code	
FP015	22	B67579	X2
57715	1		
66129	1		
66548	20		

D3564-11	Manufactured	No	200	Each	20.0000	1	1	M 11/04/01
Wearshoe								

Location	Loc Qty	Loc Code	
FP019	20		
65159	1		X1
66154	14		
66554	5		

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Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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Work Order ID: 67417

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 3/21/2011 **Required Date:** 3/31/2011

Start Qty: 1.00 **Required Qty:** 1.00

D3564-13	Manufactured	No	200	Each	57.0000	1	1	
Wearshoe								11/04/01

Location	Loc Qty	Loc Code
FP016	34	
66549	12	
66805	22	
FP17	23	
59660	1	
66136	22	X1

D3564-9	Manufactured	No	200	Each	18.0000	1	1	
Wearshoe								11/04/01

Location	Loc Qty	Loc Code
FP019	17	
55334	1	
65524	8	
~~66153~~	8	
FP19	1	X1
62238	1	

Dart Aerospace Ltd

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Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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Parent Item Name: Replacement Skidtube

Start Date: 3/21/2011 **Required Date:** 3/31/2011

Start Qty: 1.00 **Required Qty:** 1.00

D3564-5	Manufactured	No	200	Each	30.0000	1	1	
Wearshoe								11/04/01

Location		Loc Qty	Loc Code	
FG		1		
	34806	1		
FP019		24		
	57525	1		
	58709	1		
	66551	22		
FP-19		5		X1
	63575	1		
	66148	4		

D2594-3	Manufactured	No	200	Each	759.0000	16	16	
O-Ring, 205 Skidtube								11/04/01

Location		Loc Qty	Loc Code	
FP004		543		
	55546	19		
	58191	12		
	59358	12		
	65518	500		X16
fpa		216		
	61762	216		

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Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 3/21/2011 **Required Date:** 3/31/2011

Start Qty: 1.00 **Required Qty:** 1.00

D2594-1	Manufactured	No	200	Each	779.0000	16	16	
Plug, 205 Skidtube								

Location	Loc Qty	Loc Code	
FP-A	779		
42807	80		
55002	71		
58434	15		
65980	33		
66122	300		X16
66932	241		
67088	39		

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS

A	96.09.16	NEW ISSUE
B	96.12.02	AS MANUFACTURED
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183

RELEASED 07.06.28

DEO ATTACHED

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 67417
pl 11-03-21

GENERAL NOTES:

1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
2) ALL DIMENSIONS ARE IN INCHES
3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
6) WELDING TO BE DONE PER DART QSI 004.
7) FINISH:
   SEE NOTES ON
   PAGE 2 FOR D2580-041 AND
   PAGE 3 FOR D2580-045
8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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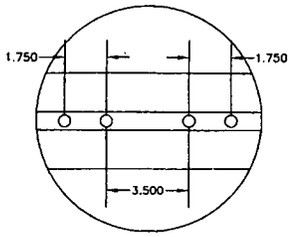
w/o 67417

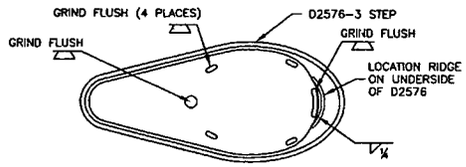
DETAIL A
SCALE 5:24



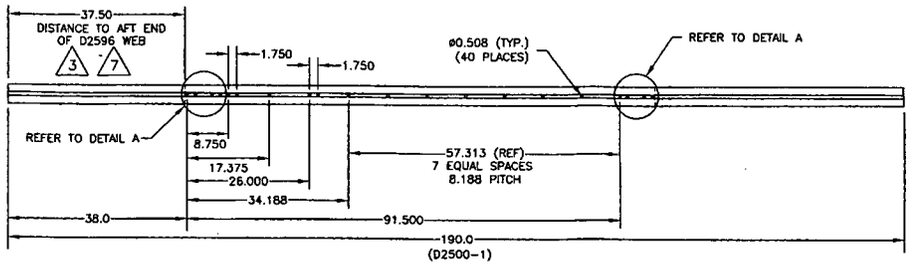
RELEASED
07.06.28

DEO ATTACHED

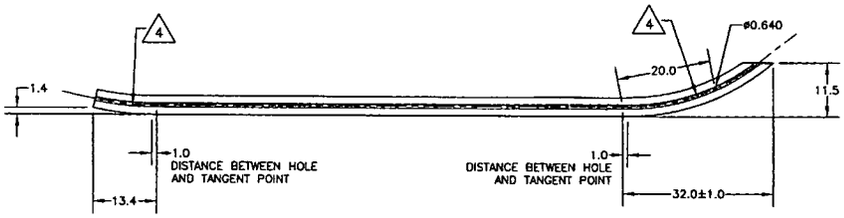
DETAIL B
SCALE 5:24



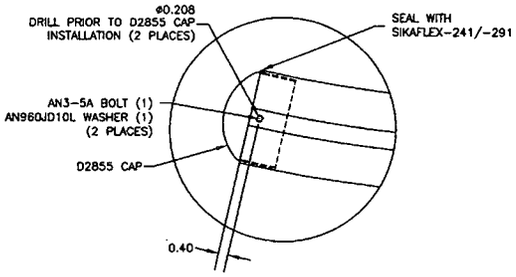
D2580-1 DRILLING DETAIL



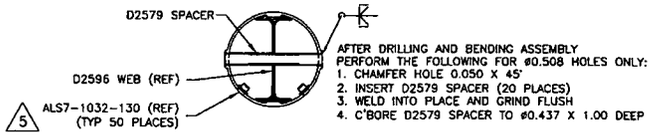
D2580-1 BENDING AND CUTTING DETAIL



DETAIL C
SCALE 5:24

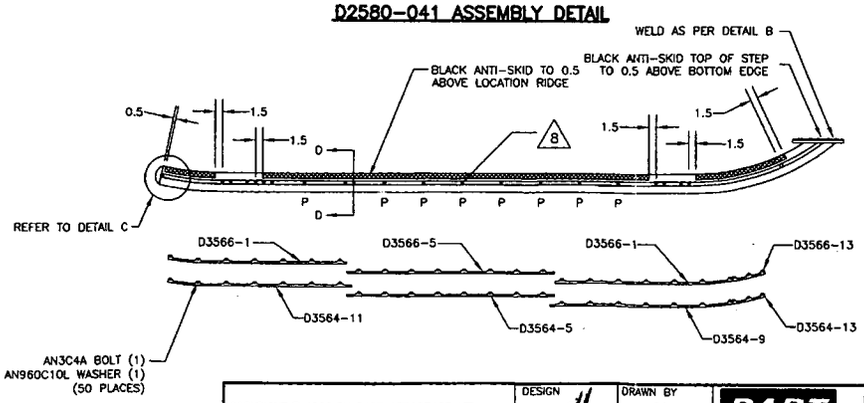


SECTION D-D
SCALE 5:24



AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO ø0.437 X 1.00 DEEP

D2580-041 ASSEMBLY DETAIL



D2580-041 NOTES

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

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DESIGN	DRAWN BY	DART	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2580	REV. D SHEET 2 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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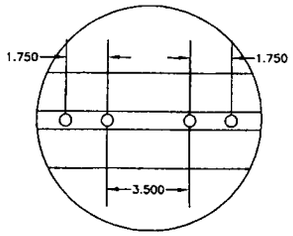
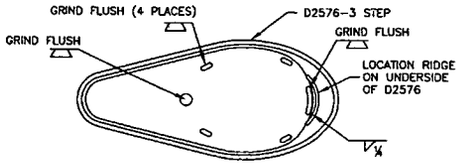
w/o 67417

DETAIL E
SCALE 5:24



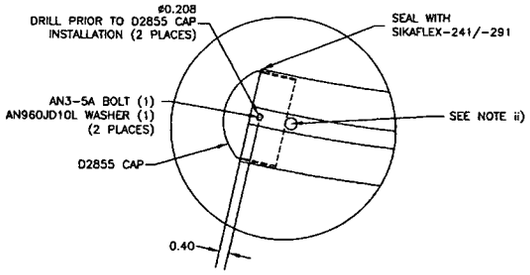
DETAIL F
SCALE 5:24



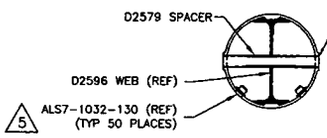
RELEASED
07.02.28

DEO ATTACHED

DETAIL G
SCALE 5:24

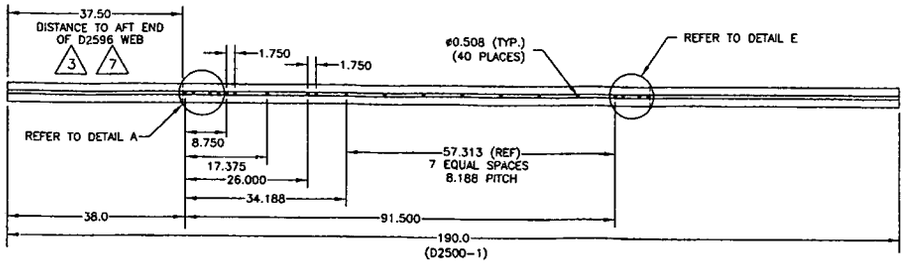


SECTION H-H
SCALE 5:24

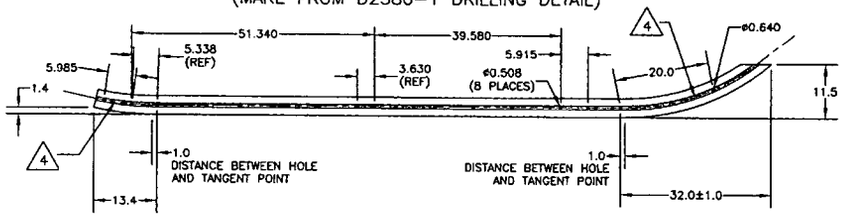


AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO ø0.437 X 1.00 DEEP

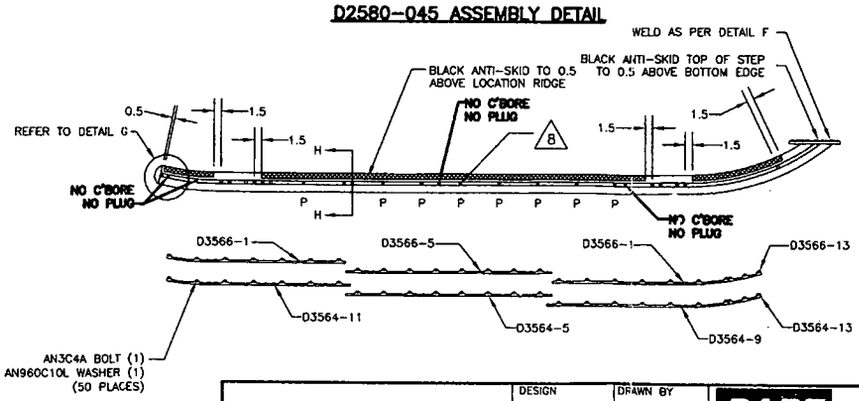
D2580-1 DRILLING DETAIL



D2580-5 BENDING AND CUTTING DETAIL
(MAKE FROM D2580-1 DRILLING DETAIL)



D2580-045 ASSEMBLY DETAIL



C

D2580-045 NOTES

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

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DESIGN RH	DRAWN BY RH	DART	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
CHECKED HA	APPROVED HA	DRAWING NO. D2580	REV. D SHEET 3 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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DRAWING NO.	TITLE		DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO.	SHEET NO.	SCALE
D2580	205 SKIDTUBE ASSEMBLY	REV. D		D2580-D-1	SHEET 1 OF 1	NTS
DRAWN	CHECKED		MFG. APPR.	APPROVED	DE APPR.	
DATE 10:09.22	DATE 10-11-04		DATE 10.11.04	DATE 10/11/04	DATE 10-11-04	

PURPOSE:
CHANGE ALL WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:
PARTS LIST IS AMENDED AS FOLLOWS:

w/o 67H17

WAS

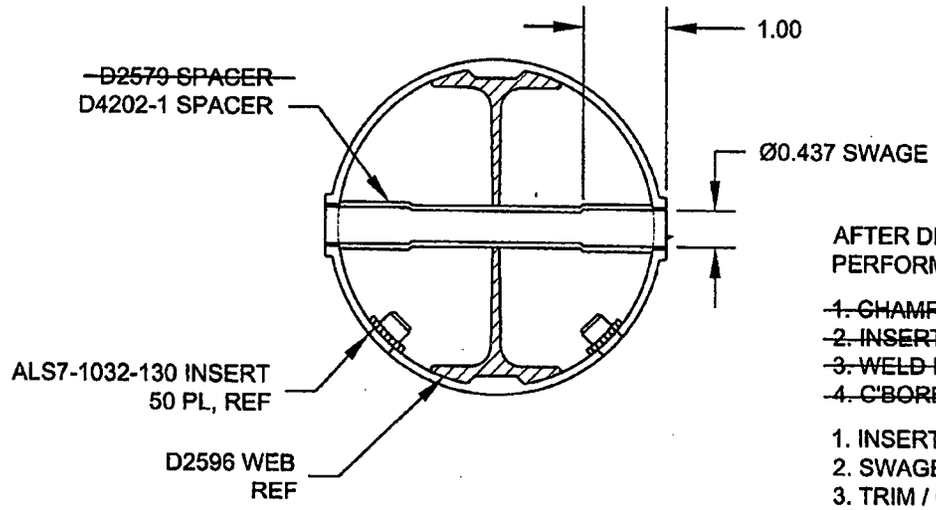
QTY -041	QTY -045	PART NUMBER	DESCRIPTION
20	24	D2579	CROSS BOLT SPACER

IS

20	24	D4202-1	SPACER

SECTION D-D & SECTION H-H ARE AMENDED AS FOLLOWS:

RELEASED
2010 -11- 18



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

~~1. CHAMFER HOLE 0.050 X 45°~~
~~2. INSERT D2579 SPACER (20 PLACES)~~
~~3. WELD INTO PLACE AND GRIND FLUSH~~
~~4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP~~

1. INSERT D4202-1 SPACER, 20 PL (-041) OR 24 PL (-045)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

SECTION D-D
NOT TO SCALE

SECTION H-H
NOT TO SCALE

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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